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Chronic CAD/Stable Ischemic Heart Disease

OPTIMAL GRAFTING STRATEGY FOR MULTIVESSEL CORONARY ARTERY BYPASS SURGERY

Oral Contributions
West, Room 3014
Saturday, March 09, 2013, 8:45 a.m.-9:00 a.m.

Session Title: The Cutting Edge in Revascularization for SIHD
Abstract Category: 10. Chronic CAD/Stable Ischemic Heart Disease: Clinical
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Background: The optimal grafting strategy during CABG is not clear beyond the LITA-LAD graft. We compared late survival in patients receiving either the radial artery (RA), right internal thoracic artery (RITA) or saphenous vein (SVG) as the preferred second graft.

Methods: Late survival data was collected for 13,130 consecutive LITA-LAD patients (65±10 yrs; 71% male; 4540 RA, 1643 RITA and 6947 SVG) from three hospitals. Early death (n=194, 1.4%) and RA+RITA patients were excluded. Propensity matching was used to obtain 1301 RA/RITA/SVG matched triplets (Total N = 3903) analyzed by Kaplan Meier analysis. Cox regression analysis was performed on all patients.

Results: The matched triplets comparison showed superior late RA survival compared to SV (P<0.001) and to RITA (P<0.001), while the RITA and SVG groups showed similar survival overall.[Fig-Left] Comprehensive risk-adjustment via Cox regression confirmed the matched results, and demonstrated relatively superior RA vs. SVG survival irrespective of age.[Fig-Right] There was a RITA vs SVG advantage only in patients ≤65 yrs [RR (95% CI) = 0.74 (0.61-0.89)] and no difference in RA vs RITA survival across all ages.

Conclusions: RA as a second arterial graft vs SVG is associated with improved late survival in all patients and especially in those <70 yrs. The RITA vs SVG survival benefit is primarily in patients ≤65 yrs. The optimal grafting strategy during CABG is either a RA or RITA in addition to the LITA-LAD graft in younger patients and a RA in older patients.